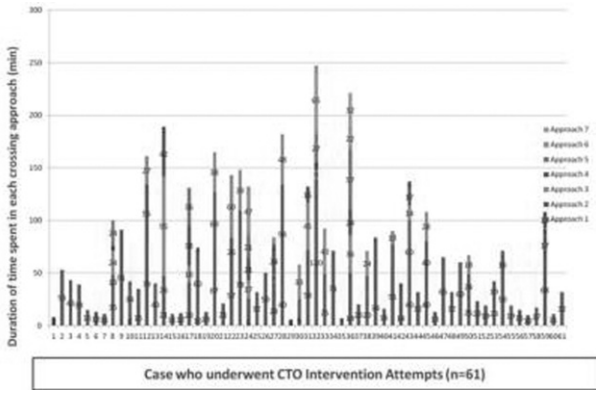
CTO target vessel	
RCA (%)	57.4
LCx (%)	21.3
LAD (%)	18.0
LM/graft (%)	3.3
Prior failed attempt for CTO PCI (%)	10
Dual injection used (%)	69
Intervention Approach	
Antegrade only (%)	54.1
Antegrade followed by retrograde (%)	34.5
Primary retrograde (%)	11.4
Retrograde crossing Technique (n=16)	
Reverse CART (%)	69
Retrograde true to true lumen (%)	25
Just marker (%)	6
Collateral used (27 patients)	
Septal (%)	73
Epicardial (%)	27
Number of approach changes for all patients (n=61)	2.8±1.7
No. of approach changes for those with switch (n=28)	3.8±1.4
Procedure time to cross CTO lesion (min)*	60 ± 53
Fluoroscopy time to cross CTO lesion (min)*	23 ± 21
Radiation exposure to cross CTO lesion (Gray)	2.5 ±4.3
Total procedure time (min)*	153 ± 77
Total fluoroscopy time (min)*	43 ± 26
Total radiation exposure (Gray)*	4.6 ± 2.1
Total contrast volume (ml)*	382 ± 152
Number of wires used*	11±8
Number of microcatheters used*	2.5± 1.4
Number of balloons used*	5.0±2.5
Number of stents used*	3.0±1.5

Conclusions: In the "hybrid approach" to CTO intervention, multiple changes in the crossing approach are needed in approximately half the patients, with a high overall procedural success rate.



POSTERS

TCT-452

Drug-Eluting Stents for the Treatment of Chronic Total Occlusion: A Comparison with Sirolimus, Paclitaxel, Zotarolimus (Endeavor Resolute), BiolimusA9, EPC Capture and Everolimus-Eluting Stent: Multicenter Registry in Asia

Sunao Nakamura[1], Hisao Ogawa[2], Jang-Ho Bae[3], Yeo Cahyadi[4], Wasan Udayachalerm[5], Damras Tresukosol[6], Sudaratana Tansuphaswadikul[7] [1]New Tokyo Hospital, Chiba, Japan, [2]Kumamoto University Hospital, Kumamoto, Japan, [3]Konyang University Hospital, Daejeon, Korea, Republic of, [4]Husada Hospital, Jakarta, Indonesia, [5]King Chulalongkorn Memorial Hospital, Bangkok, Thailand, [6]Faculty of Medicine Siriraj Hospital, Bangkok, Thailand, [7]Chest Disease Institute, Nonthaburi, Thailand

Background: The aim of this study is to compare the safety and efficacy of Sirolimus (SES), Paclitaxel (PES), Zotarolimus (ZES-R/ Endeavor Resolute), BiolimusA9 (BES), EPC capture (ECS) and Everolimus-eluting stent (EES) on the outcome of patients with chronic total occlusion (CTO).
Methods: A prospective analysis of 1576 patients with 1738 CTOs (396 SES, 526 PES, 219 ZES-R, 209 BES, 148 ECS, 240 EES) in six high volume Asian centers after successful recanalization of CTO was performed. The study endpoints were 30 days and 12 and 36 months major adverse cardiac events (MACE) and target lesion revascularization (TLR).
Results: See table for clinical results.
Conclusions: The use of drug-eluting stents in patients with CTO was safe with low acute complication. Patients treated with 2nd generation DES such as ZES-R, BES and EES showed lesser rate of restenosis compared with 1st generation drug-eluting stents.

		SES	PES	ZES-R	BES	ECS	EES
Number of patients/lesions		365/396	482/526	199/219	188/209	123/148	219/240
LAD/LCX/RCA (%)		54/23/23	52/24/24	50/18/32	46/21/33	52/18/30	53/21/26
MACE at 30 days (%)		0.5	0.6	0.5	0	0.8	0
Proximal RD (mean: mm)		2.86	2.80	2.85	2.84	2.92	2.87
MLD at baseline (mean: mm)		2.65	2.54	2.60	2.78	2.62	2.67
12 months	MLD (mean: mm)	2.50	2.30	2.49	2.66	2.10	2.58
	TLR (%)	5.5	8.3	7.0	5.9	17.9	4.5
	MACE (%)	7.1	8.7	7.5	5.9	19.5	4.5
36 months	MLD (mean: mm)	2.20	2.02	2.35	2.45	1.89	2.40
	TLR (%)	9.9	13.7	11.1	10.1	24.4	8.7
	MACE (%)	15.6	19.5	17.1	16.0	30.9	13.7

TCT-453

Serial Angiographic Follow-Up after Successful Implantation of Sirolimus, Paclitaxel, Everolimus and Zotarolimus-Eluting Stent for Chronic Total Occlusions: Multicenter Registry in Asia

Sunao Nakamura[1], Hisao Ogawa[2], Jang-Ho Bae[3], Yeo Cahyadi[4], Wasan Udayachalerm[5], Damras Tresukosol[6], Sudaratana Tansuphaswadikul[7] [1]New Tokyo Hospital, Chiba, Japan, [2]Kumamoto University Hospital, Kumamoto, Japan, [3]Konyang University Hospital, Daejeon, Korea, Republic of, [4]Husada Hospital, Jakarta, Indonesia, [5]King Chulalongkorn Memorial Hospital, Bangkok, Thailand, [6]Faculty of Medicine Siriraj Hospital, Bangkok, Thailand, [7]Chest Disease Institute, Nonthaburi, Thailand

Background: To evaluate the long-term efficacy of Sirolimus (SES), Paclitaxel (PES), Everolimus (EES) and Zotarolimus-eluting stent (ZES-R/ Endeavor Resolute) on the outcome of patients with chronic total occlusions (CTO).
Methods: A total of 378 patients with 414 CTO lesions (male 72.8%, mean age 69.9 yrs, LAD 49.5%, LCX 21.0%, RCA 26.6%, Others 2.9%) were treated with SES (102 patients 118 lesions, lesion length 36.1±12.9mm, stent length 41.7±15.6mm), PES (108 patients 114 lesions, 38.5±12.8mm, 43.9±19.5mm), EES (88 patients 94 lesions, 34.2±13.8mm, 40.1±14.8mm) and ZES-R (80 patients 88 lesions, 37.1±13.9mm, 42.3±17.3mm) respectively. We conducted follow-up coronary angiogram and evaluated late loss in all patients after successful implantation of SES, PES, EES and ZES-R (9, 12, 18, 24, 36 months respectively).
Results: See table for clinical results.
Conclusions: There is a different timing of late catch up phenomenon (late lumen loss) of SES, PES, EES and ZES-R (SES: 12-18 months, PES: 9-12 months, EES: 12-18 months and ZES-R: 12-24 months) after successful implantation of SES, PES, EES and ZES-R in patients with chronic total occlusion. Patients treated with SES, EES and ZES-R showed lesser loss of minimum lumen diameter compared with PES.

	SES	PES	EES	ZES-R
Number of patients/lesions	102/118	108/114	88/94	80/88
Procedural success (%)	100	100	100	100
Proximal reference diameter (mm)	2.87±0.78	2.82±0.84	2.84±0.70	2.80±0.78
MLD post procedure (mm)	2.62±0.77	2.60±0.79	2.66±0.69	2.60±0.67
9 months	2.50±0.80	2.29±0.74*	2.55±0.70	2.49±0.71
12 months	2.49±0.79	2.10±0.75*	2.50±0.60	2.44±0.63
18 months	2.31±0.83	2.08±0.79*	2.39±0.77	2.30±0.71
24 months	2.29±0.76	2.06±0.83*	2.25±0.78	2.18±0.78
36 months	2.29±0.76	2.06±0.83*	2.23±0.80	2.16±0.77

*p<0.05 vs. SES, EES and ZES-R.